

Application Serial No: 10/076,858  
Attorney Docket No.: 51969 (ACT-183/184)

### REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow are respectfully requested.

Claims 10-27 are pending in the application.

By the amendments, claim 10 has been revised to point out that the wet-etched pit has a minimum and a maximum *width*, and the dry-etched hole has a *width* less than or equal to the minimum *width* of the wet-etched pit. Support can be found at least in Figures 17 and 18. Claim 15 has been amended to recite that the second wet-etched pit comprises a flat surface parallel to the upper surface of the substrate. Support can be found at least in claim 17 and in Figure 10. Claim 17 has been revised for consistency with claim 15, and claims 19 and 21, both indicated as containing allowable subject matter, have been rewritten in independent form. Other claim amendments are for form or readability.

Applicants note with appreciation the indication of allowable subject matter with respect to claims 17-19, 21, 22, 24 and 26. Applicants further note that claim 27 was not rejected on any ground, and thus presume that such claim also contains allowable subject matter.

Turning now to the Official Action, the Office questions whether U.S. Published Application No. 2003/0067069 on the form PTO-1449 was intended. This number is incorrect - the number correctly reads 2003/0067049. If the Office cannot make a correction to the form PTO-1449 and/or if the intended document is not in the Office's file, applicants will provide a corrected form and/or a copy of the cited document at the Office's request.

Claims 10, 12-14 and 25 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,738,145 (*Sherrer '145*). In addition, claim 11 stands rejected under 35 U.S.C. §103(a) as being obvious over *Sherrer '145*. These rejections are respectfully traversed for at least the following reasons.

Claim 10, as amended above, sets forth a micromachined substrate that includes: a) a wet-etched pit having a minimum and a maximum *width*; and b) a dry-etched hole

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disposed in the wet-etched pit, wherein the dry-etched hole extends through the substrate and has a *width* less than or equal to the minimum *width* of the wet-etched pit.

It is well established, that in order to establish anticipation under §102, each element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Kalman v. Kimberly-Clark Corp., 218 USPQ 789 (Fed. Cir. 1983). That is not the case here.

*Sherrer '145* discloses an optical fiber pressure sensor. The embodiment of Figure 12, relied on in the Official Action, includes a base layer 20 with a fiber optic hole, an etch stop layer 24 on the base layer 20, a fiber stop layer 28 on the etch stop layer, and a diaphragm cap layer 32 on the fiber stop layer 28. A fiber stop hole 80 has a two-level structure. The fiber stop hole 80 is preferably made by anisotropic etching, and the 2-level structure can be made by dry etching or anisotropic wet etching.

*Sherrer '145* does not disclose or suggest each feature of applicants' invention. For example, *Sherrer '145* does not disclose or fairly suggest a dry-etched hole extending through the substrate and having a *width* less than or equal to the minimum *width* of a wet-etched pit. In this regard, the Official Action correlates the *Sherrer '145* fiber stop hole 80 to the presently claimed wet-etched pit. For the fiber stop hole 80 to function for its intended purpose, i.e., as a fiber stop, the minimum *width* of the fiber stop hole 80 is less than the *width* of the hole for the optical fiber 22 in the base layer 20. *Sherrer '145* thus does not disclose or suggest each and every feature of claim 10.

Accordingly, withdrawal of the §102 and §103 rejections based on *Sherrer '145* is respectfully requested.

Claims 15, 16, 20 and 23 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,257,772 (*Nakanishi et al*). This rejection is respectfully traversed for at least the following reasons.

Claim 15, as amended above, sets forth a micromachined structure. The structure includes: a substrate; a first wet-etched pit disposed in the substrate; a second wet-etched pit disposed in the substrate, the second wet-etched pit extending into the substrate a greater depth than the first wet-etched pit and comprising a flat surface parallel to the upper surface of the substrate; and a dry-etched pit disposed between, and adjacent to, the first and second wet-etched pits.

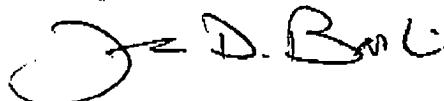
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*Nakanishi et al* relates to a planar type photodiode (PD) module as a receiving device for optical communication. The Office relies on the device shown in Figure 31 of *Nakanishi et al*. This device, however, is not suggestive of claim 15 as currently presented. For example, *Nakanishi et al* does not disclose or fairly suggest a second wet-etched pit extending into a substrate a greater depth than a first wet-etched pit and comprising a flat surface parallel to the upper surface of the substrate. In this respect, the v-grooves 34 and 35 disclosed by *Nakanishi et al* do not appear to have a flat surface parallel to the upper surface of the substrate. Accordingly, withdrawal of this rejection is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,



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